Docket No. CE11375R

Amendments to the Claims:

1-6 (cancelled)

7. (previously amended) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system, the power allocation and user assignment method comprising the steps of:

transmitting a pilot signal to a plurality of user equipments;

collecting by a radio network controller (RNC) of the mobile communication system a signal/noise ratio (S/N) of the pilot signal as received by the plurality of user equipments; sorting by the RNC the plurality of user equipments by the strength of the S/N of the pilot signal from a strongest pilot signal to a weakest pilot signal;

determining a number (K) of a particular user equipment of the plurality of user equipments to support on a broadcast channel;

determining by the RNC a coverage area within the cell for the MBMS services; and

assigning a portion of the plurality of user equipments, one through K, to the broadcast channel, wherein the step of determining ~~a~~ the number K includes a step of:

$$K = \arg\max_{k}\left(P_B(N_{UE}) - P_B(k) - \left(\sum_{i=k+1}^{N_{UE}} P_i \right) \right)$$

wherein $P_B(k)$ is the required power allocation of the broadcast channel to support user k, $P_B(N_{UE})$is the total power allocation required to cover all users using the broadcast channel and P_i is the required power to support user i using a dedicated channel.

8-34 (cancelled)

35. (Previously added) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system, the power allocation and user assignment method comprising the steps of:

transmitting a pilot signal to a plurality of user equipments;

sorting each of the plurality of user equipments by a strength of the pilot signal;

determining a number (K) of a particular user equipment of the plurality of user equipments to support on a broadcast channel; and

assigning a portion of the plurality of user equipments, one through K, to the broadcast channel, wherein the step of determining ~~a~~ the number K includes a step of:

$$K = \arg\max_{k}\left(P_B(N_{UE}) - P_B(k) - \left(\sum_{i=k+1}^{N_{UE}} P_i \right) \right)$$

wherein $P_B(k)$ is the required power allocation of the broadcast channel to support user k, $P_B(N_{UE})$is the total power allocation required to cover all users using the broadcast channel and P_i is the required power to support user i using a dedicated channel.